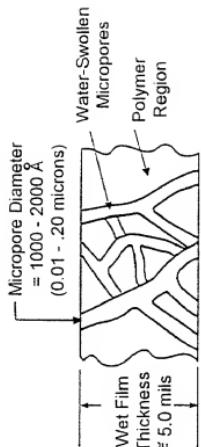


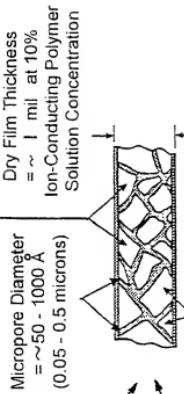
003221-20152-655

The Gas Permeability and Ionic Conductivity Properties of the Microcomposite Membrane will be Adjusted by Controlling the Concentration of Infiltrated Ion-Conducting Polymer and its Degree of Sulfonation



A. Water-Swollen Microporous Membrane

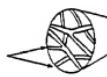
Ion-Conducting Polymer Regions  
Polymer Regions Interpenetrating



B. Dried, Heat-Treated, Substrate Membrane

1. Solvent-Exchange  
2. Ion-Conductor Infiltration  
3. Drying, Heat-Treatment

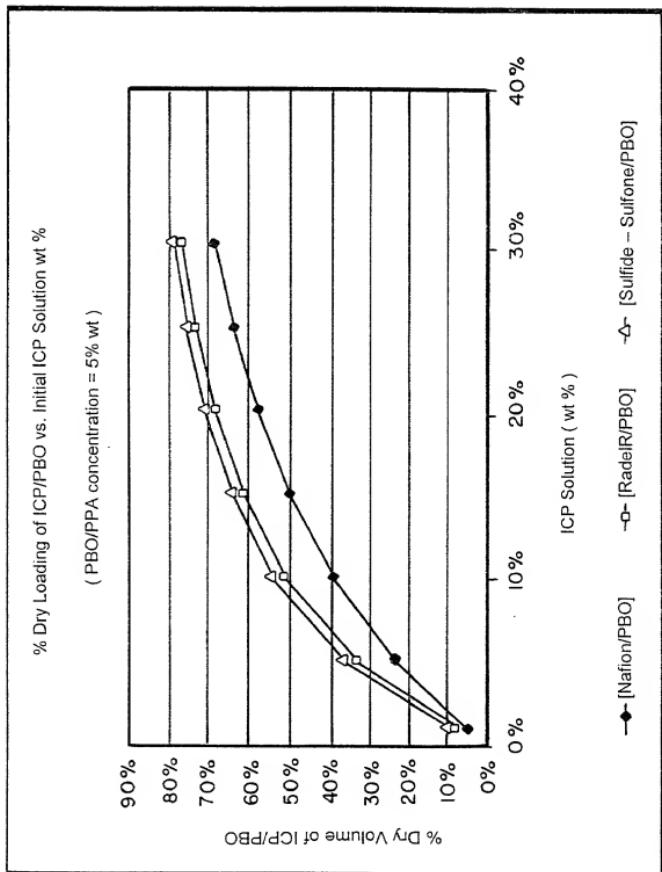
1. Drying
2. Heat-Treatment
3. Film Shrinkage through the Thickness



C. Dried, Heat-Treated, Microcomposite Membrane Containing ~ 50 Volume Percent Ion-Conducting Polymer

1. Solvent-Exchange  
2. Ion-Conductor Infiltration  
3. Drying, Heat-Treatment

FIG. 1



F | G. 2